

West Hawaii Today

Biggest telescope has big price tag

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\$100M SPENT SO FAR ON TMT WITH NARY A STONE TURNED ON MAUNA KEA

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HILO -- The TMT Observatory Corp. has spent \$100 million so far on a Mauna Kea telescope that has been in planning for eight years.

According to Thirty Meter Telescope representative Sandra Dawson, the project has received donations of \$50 million and \$200 million from the Gordon and Betty Moore Foundation. Gordon Moore is a co-founder of Intel Corp.

The California Institute of Technology and the University of California have kicked in \$100 million in matching funds in response to the Moore Foundation, and Canadian partner universities have kicked in \$25 million.

That brings the total commitment to \$375 million, Dawson said. The money raised to date is still \$725 million short of the \$1.1 billion total cost of the telescope, in current dollars, but she said funds from TMT's other partners -- including Japan, China and India -- will be enough to fund it fully.

"(TMT partner) contributions have not been finalized, but based on their desired level of participation we expect the funding needs to be met," Dawson said.

The TMT is an advanced, next generation astronomical telescope that would have a primary mirror 98 feet, or 30 meters, in diameter. Like the Keck Observatory telescopes, the mirror will be assembled in segments. The Keck mirrors are comprised of 36 segments each; TMT will have 492, working together as a single, precise surface.

Situated on the northwest slope of Mauna Kea, away from the summit ridge, it would use adaptive optics technology to study the heavens with greater sensitivity and detail than anything that exists today.

The \$100 million costs have gone toward design and development, Dawson said. There was the initial atmospheric testing at five sites in Hawaii, Mexico and Chile, the environmental impact statement process, and the engineering needed to make the telescope work. Telescope components, including some mirror segments, have been fabricated and tested, and money has also gone toward staff salaries.

"It was money well-spent," Dawson said.

Tax forms from the TMT Observatory Corp., a nonprofit organization, show that in the 2008-2009 fiscal year, the last year for which data are available, at least seven employees have earned six-figure salaries. Project Manager Gary Sanders earned \$221,300 in reportable compensation.

Some of the money has also gone toward the Hawaii Island Economic Development Board to build support for the telescope. Members of that board have consistently testified in favor of the TMT in public hearings during the EIS process.

In a tax filing for the 2006-2007 fiscal year, the board reported spending an unspecified sum for "a scoping survey to assess our islands (sic) thoughts on future development on Mauna Kea" in conjunction with the TMT.

The next year, HIEDB reported spending \$42,584.88 to conduct "meetings, surveys and collaborative efforts, and opinions and recommendations from a broad cross section of community groups. An Advisory Board was created to help shifting of mindsets and create positive enthusiasm amongst our communities favoring the sitting (sic) of the Thirty Millimeter (sic) Telescope on Mauna Kea."

In the fiscal year after that, in 2008-2009, HIEDB spent \$153,522 on public outreach and education, presentations in K-12 and college classrooms, a Workforce Development Program Roundtable, the development of the EIS and the creation of an advisory board to work out how to deliver the TMT's community benefits program. TMT in turn gave \$200,757 to HIEDB, which was enough to cover expenses for the past two years. Board secretary Mike Kaleikini said that HIEDB did some outreach for TMT as part of its mission to advocate for balanced economic growth on the Big Island, but he was not involved in the financial details. Other HIEDB officials could not be reached for comment.

Of course, TMT cannot move a rock on Mauna Kea without the final judgment in a pending contested case hearing, which will be held Aug. 15 through Aug. 18 and possibly Aug. 25. After weighing the concerns from both the University of Hawaii and those objecting to the Board of Land and Natural Resources' approval of the project in February, hearings officer Paul Aoki will issue a recommendation on the telescope.

The land board has the option of accepting or rejecting Aoki's recommendation and may reverse its approval of the TMT permit.

"We do not expect the contested case to have any impact on the partners' funding," Dawson said.

If the final decision favors the approval of the TMT, opponents of further telescope development on Mauna Kea may appeal the decision in 3rd Circuit Court.